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METHODS OF CARING FOR STUDY SKINS OF BIRDS

BY

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METHODS OF CARING FOR STUDY SKINS OF BIRDS

The topic I have chosen might be thought long ago exhausted. Examination of the eight volumes of the *Proceedings* of this Association, however, fails to disclose previous mention of many of the problems involved.

Whether or not the special interest of any museum lies in the field of ornithology, bird skins, of all natural history objects, inevitably find a place among its possessions. The relatively large number of amateurs who collect birds almost guarantees that each newly started museum shall soon receive by gift or bequest, irrespective of its own desires, collections in this field. It becomes the duty of the institution to care for this sort of material, not only because of responsibility to donors, but because, as I most earnestly believe, bird skins constitute a valuable part of every museum's equipment on account of their research and educational usefulness. Practically every museum administrator has to deal with the bird skin problem, and it deserves thoughtful consideration.

The care required in preserving a collection of bird skins and in making them available for use is really not great in amount; but it is of a particular kind. Our experience in the California Museum of Vertebrate Zoology, in gathering and housing some 35,000 bird skins within the past seven years, has brought about the revision of long-standing customs with regard to the handling of bird skins,

involving points which I venture to offer herewith, trusting that some of them may prove new and subject to adoption by others having to face the problem.

There are two sources of bird skins: (1) from gift or purchase from collectors, very often amateurs, and (2) as gathered by the trained field collector under the direction, and in accordance with the determined methods, of the museum itself. Of course, practically nothing further can be done with the bird skin from the first source. It may be made over, if particularly distorted, but I consider this advisable only in extreme cases. The original 'make' of a skin, however peculiar or inconsistent with current results, gives it individuality; and the remaking of it will not only rob it of this interest but is liable to obscure or modify some real characters of the species it represents.

In accessioning such specimens it is my firm belief that the original label, and all subsequent labels that have been attached, should be retained. A label should be held sacred, never to be separated from the specimen. This tenet I should insist upon with no exception whatever; not even such as suggested by Osgood in the fourth volume of our *Proceedings*.[1] The original label, no matter how ungainly in size or form, or how inconvenient, should be preserved inseparable from the skin. Both can be kept together with maximum safety as well as either alone. If the label shows signs of disintegration it is high time to take special pains to care for the skin also, as by providing a separate small covered box or wrapper for it.

In addition to the original tags, a regular museum label will be tied to each specimen, upon which is inscribed the department number and the current name of the species represented. In the case of original tags which are falling to pieces or upon which the ink is fading, all of the data should be duplicated upon the newly added label.

A word here as to labels, even though this subject has been so exhaustively discussed by Osgood[2] and others previously. Experience has led me to prefer a label somewhat larger than that employed by the Biological Survey. Our regular label for bird and mammal skins measures 63 x 15 mm. ($2\frac{1}{2}$ x $\frac{5}{8}$ inches). The only printing upon it is the name of the institution in small type centered at the top on one side only. The string is attached through two punctures at the

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[1]Osgood, W. H., Labeling Large Collections of Mammals and Birds, *Proc. Am. Assoc. Mus.*, IV, 1910, 107.

[2]Ibid., 105–111.

left of this. It seems to me that a great mistake is made by printing the bulk of the data on the labels, as is customary in many institutions. The original handwriting, and especially the signature of the field collector or museum assistant, is a guarantee of authenticity. The signature vouches for the facts upon the label. I have, too, discarded entirely the use of the rubber stamp either in the field or museum. Every item on the label is handwritten with Higgins' Eternal Ink. We have found that the most approved stamp pad ink (every sort we have tried) is affected in one way or another. For instance, in a skin which is greasy, such as that of a Night Hawk, the grease runs out on to the label, reaching it by way of the string, and partly or entirely obliterates the legend imprinted by the rubber stamp. Fading from other causes has occurred with some of our labels. Carbon writing ink is the only thing for inscriptions upon specimen labels.

As to the kind of string, we have finally come to adhere strictly to no. 8 cotton thread, "J. & P. Coats Best 6 Cord." This so far has defied the action of grease and various other deteriorating agents. We once received a collection of skins in which the labels were tied with the most approved linen cord. In course of a few years this cord has become so rotten that in many cases the labels have had to be retied—always a dangerous proceeding because of liability of mixing labels.

As regards tying the label to the bird skin, our custom is again at variance with that of most other museums. We leave the tag strung loosely, falling about one inch from the crossed legs to which it is tied, so that it dangles freely. Experience has convinced me that when labels are tied directly and firmly to the feet, with no intervening string, the specimen is more readily subject to breakage. It is often found necessary to turn the label in order to read the legend on both sides; where the label is tied firmly to the feet this is difficult or impossible without moving these appendages, and, their attachment to the skin being more or less brittle, their breakage in many cases occurs.

The distribution of the data on the label in a uniform order has seemed to us worth attention. The side of the label which bears the name of the institution should be reserved explicitly for the department number and for the name of the species. The reverse side should contain all of the field data. The order in which we now place this is as follows, occupying three or four lines, as need be: sex, original or collector's number, signature of collector; exact locality,

altitude, and general locality; date; measurements; colors of soft parts. All of this data is regularly inscribed by hand on one side of the label only, as emphasized above.

Where the museum's interests lead to field work under its own direction it is, of course, not difficult to secure an ideal collection of skins. With field men employed, a uniform make of skin reaches the museum and the style and content of the field label can be dictated in advance. Always have the permanent label tied on in the field *when the bird is skinned*, this label bearing the entire field data. It seems to me the height of folly to attach a temporary number even though this corresponds to a note-book entry, leaving the full data to be inscribed at the museum or even at the end of some days or weeks collecting in the field. Serious error is thereby invited. The fully inscribed label, attached to the specimen at once, is as essential a part of the whole thing as the bill or feet and should be retained inviolate.

Assuming that the skin has arrived at the museum, whether from vagarious source or from the regularly employed field collector, the first step is, of course, to thoroughly fumigate. We use the carbon bisulphide method in the small zinc cases. This has always proved completely effective. The horror of introducing dermestes throughout our cases when distributing new accessions leads us to perform the duty of fumigation with the greatest conscientiousness. The memory of a sad experience has taught us the lesson!

It is not my purpose to describe here any particular system of cataloging. Suffice it to say that we employ the well-known card system under which there are three entries—in the accession catalog, the department catalog, and the reference catalog. The department catalog, of course, provides every specimen in an accession with its running catalog number. The reference catalog is arranged alphabetically by genera and under these by specific and subspecific names together, subspecific being treated as if specific. By a plentiful use of guide cards the catalogs can be used with ease.

As to installation, it is of the utmost importance that bird skins be not cramped for room. Deterioration is rapid where birds are piled in trays one upon another and where they are at the same time subject to frequent handling. Wear and tear of feathers then becomes great. This can be obviated by providing adequate space. Our standard unit zinc case with pulpboard-bottom trays seems to be about a duplicate of what has been adopted elsewhere of recent years. We use no cotton lining in the trays. The smooth surface

of the pulpboard bottom produces least ruffling of the feathers and facilitates handling of bird skins *en masse*. Bird skins in long series may be lifted and transferred easily by the use of a thin, limber piece of cardboard which can be slid under the mass of skins with very little disturbance of their relative positions. In a surprisingly few minutes, when it becomes necessary, a whole case of birds such as warblers, numbering 2000 or more, may be moved from one set of trays to another. The only conditions under which a tray lining seems to me desirable is when greasy bird skins are to be housed; then a layer of blotting paper beneath the affected specimens is useful to prevent the oil from being absorbed by the tray bottom.

A very important item to my mind is the position in which the bird skins are laid upon each tray. The head should be directed to the left so that the label extends straight out to the right, and reads right side up. A series of skins thus lies in fore-and-aft rows in the tray. As the tray is slid in and out of the case the inevitable resulting momentum tends to slide the skins so that they press upon one another sideways. I know that custom in some other museums prescribes that the birds shall be arranged in series crossways of the trays, the heads pointing away from the case door. Where the trays are then handled by any but the most careful attendant, there is more or less excessive motion, and this is bound to produce a sliding of the birds toward the back end of the tray, the heads of one row crowding into the tails of the next, thus causing a serious disarrangement of the plumage. This is minimized by the method of arrangement we have adopted, as just indicated. Incidentally, we have printed and conspicuously displayed upon the front of several of the trays in each case: "Handle trays gently. Slide the trays slowly so as not to disarrange contents." We believe this admonition is heeded at least occasionally, often enough to make it worth while! In our own institution (and it seems to me this should be the case everywhere) our cases of study skins are available to be opened and inspected by the university student and by practically everyone else who declares special interest in inspecting their contents. It is true that we discourage casual visitors from looking at the study series, and to meet the usual needs of beginners, or such casual inquirers, we have a separate case containing a selection of study skins representing the local species. This is usually sufficient to absorb the time and interest of the non-technical visitor.

Let me take this opportunity to urge the value of collections of

bird skins—to give reasons why they should be adequately and conscientiously cared for. The value of a bird skin falls under two heads; research and education, though these terms are really closely allied, and the two functions blend. First, the bird skin, together with its label, is a repository of significant facts in a great number of fields. Of these we may mention: geographic distribution, ecology, phylogeny, systematics, meaning of coloration, economic relations. New lines of inquiry are continually being brought to our attention such as may be based upon the study of bird skins. I know that external characters, such as are presented by the study skin alone, are often summarily depreciated, as merely superficial; but reflection brings out the fact of correlation of parts, and this fact must be given due weight. A single external feature may constitute an index to a train of dependent and correlated internal structures. The recognition of the one index character will often be sufficient for ecologic or systematic needs.

As regards general educational value, the bird skin, in lieu of, or as supplementing, properly mounted and displayed specimens, serves well in class instruction and for the use of the amateur student who may be independently working in the fascinating field of ornithology. The number of the latter is increasing and the value of the museum study collection open for public use is correspondingly increasing. In this connection the fact of wide-spread discouragement of private collecting should be borne in mind, no matter how much we may sincerely deplore this tendency.

The bird skin is an inevitable element in the equipment of most museums and should everywhere be accorded all needed attention to the end that it may serve fully its immediate and future usefulness.

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